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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

AUG 30 1994

SPRINT CORPORATION  
WASHINGTON, D.C.

In the Matter of )  
 )  
Amendment of the ) Gen Docket No. 90-314  
Commission's Rules to )  
Establish New Personal )  
Communications Services )

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**SPRINT CORPORATION'S OPPOSITION TO  
PETITION FOR RECONSIDERATION**

Sprint Corporation ("Sprint"), on behalf of the United and Central Telephone companies, Sprint Communications Co., L.P., and Sprint Cellular, hereby files comments on the Petition For Further Reconsideration and Request For Clarification of ArrayComm and SCI, to the Memorandum Opinion and Order ("the order" or "the decision").<sup>1</sup>

In their petition, SCI and its parent company ArrayComm (developers of SDMA technology based on directional antennas) claim that their joint comments in the above docket were not considered in the Commission's decision to revise PCS power limits, and furthermore that the decision "may, in fact, inadvertently discourage use of such antennas."<sup>2</sup>

1. In the Matter of Amendment of the Commission's Rules to Establish New Personal Communications Services, GEN Docket No. 90-314, Memorandum Opinion and Order, FCC 94-144, released June 13, 1994 ("Memorandum Opinion And Order").

2. SCI/ArrayComm Petition, p. 5.

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Petitioners appear to believe that the Commission's increase in base station power limits up to 1640 watts e.i.r.p. and imposition of a 100 watt e.r.p. limit on base station transmitters will put their directional or "smart" antenna technology at a competitive disadvantage in the PCS marketplace. However, the petition does not adequately explain or substantiate these assertions. Nor does Sprint know of any corroborative evidence.

Petitioners claim that the establishment of power limits in terms of watts per channel, rather than watts per hertz "encourages the use of narrower channels and therefore favors the use of narrowband RF channels over wide-band channels...."<sup>3</sup>

Petitioners further claim that the 100 watts per channel transmitter limit, combined with directional antenna technology, will "preclude large coverage areas by restricting the 'broadcast' control channels...."<sup>4</sup> They seek clarification that the limits apply to individual base station transmitters, regardless of the number of transmitters per base station, the antenna elements to which transmitters are connected, or the channels in which each transmitter may operate.

Sprint believes that the concern expressed in their petition over the measurement of power in watts per channel is unfounded. For one thing, Petitioners' complaint that the watts

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3. Id.

4. Id., p. 6

per channel measurement favors narrowband over wideband deployment is inconsistent with ArrayComm's own previous position statement that SDMA technology is adaptable to all modulation formats -- including narrowband (AMPS, NAMPS) as well as wideband (TDMA, CDMA).<sup>5</sup>

In addition, Sprint does not believe that a limitation based on watts per channel is in itself a hindrance to the development of SDMA or any other technology, since many other factors must be weighed in selecting a technology for a particular service -- such as bits per frame, codec rate, etc. Sprint believes that the PCS service provider will select the technology for the service provided within the guidelines established in the order. Sprint does not believe that these guidelines unfairly disadvantage SDMA or any other technology; on the contrary Sprint believes they are broad enough to encompass the parameters of both "smart" and omnidirectional antennas, and will encourage competition in the deployment of PCS technologies.

Sprint urges the Commission to uphold the PCS power limits of 1640 e.i.r.p. for base stations and 100 watts e.r.p. for base station transmitters. Sprint welcomes the SDMA smart antenna concept as one of an array of promising antenna technologies. However, we do not believe that Petitioners have

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5. "SDMA Technology for Personal Communications Services" presented by ArrayComm at JTC, 1-5 November 1993, Phoenix, AZ, p. 3.

presented any convincing evidence that this technology suffers a competitive disadvantage under the Commission's current PCS power limits.

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August 30, 1994

## CERTIFICATE OF SERVICE

I, Melinda L. Mills, hereby certify that I have on this 30th day of August, 1994, sent via U.S. First Class Mail, postage prepaid, or Hand Delivery, a copy of the foregoing "Sprint Corporation's Opposition to Petition for Reconsideration" in the Matter of Amendment of the Commission's Rules to Establish New Personal Communications Services, Gen Docket No. 90-314 filed this date with the Acting Secretary, Federal Communications Commission, to the persons on the attached service list.

  
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